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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,522	11/21/2007	Tsuyoshi Tatsukawa	36856.1342	9096

54066 7590 05/06/2010
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EXAMINER

LIAN, MANGTIN B.

ART UNIT	PAPER NUMBER
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2832

NOTIFICATION DATE	DELIVERY MODE
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05/06/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/531,522	Applicant(s) TATSUKAWA ET AL.	
	Examiner MANGTIN LIAN	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings objection made in office action mailed on 1/5/2010 is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (U.S. Pub. No. 2002/0008606 A1) in view of Ibata et al. (U.S. Patent No. 6,169,470 B1).

With respect to claim 9, Okuyama et al., hereinafter referred to as "Okuyama," teaches a laminated ceramic electronic component 1 (FIGs. 2A-3) comprising:
a ceramic laminated member 11a-16a; an inner conductor 13b and 15b provided inside of the ceramic laminated member 11a-16a; an outer electrode 3 and 4 provided on the surface of the ceramic laminated member 11a-16a; and
a lead conductor 15c and 13d connecting the inner conductor 13b and 15b to the outer electrode 3 and 4; and
the lead conductor 15c and 13d is defined by a plurality of lead conductor layers 12b-c, 13c-d, 14c-d, 15c-d, and 16b-c that overlap and are in contact with each other (paras.

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0056-0057, 0060, 0062-0063). Okuyama does not teach the laminated ceramic electronic component, wherein a thickness of the lead conductor is less than a thickness of the inner conductor.

In the same field of invention, Ibata et al., hereinafter referred to as "Ibata," teaches a laminated ceramic electronic component (Fig. 1), wherein a thickness of the lead conductor 7 is less than a thickness of the inner conductor 5 (compare the thickness of lead conductor 7 and inner conductor 5 in Fig. 1) (col. 3, lines 22-31, 47-55, 60-63). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the lead conductor thickness teaching of Ibata in the laminated ceramic electronic component of Okuyama to provide excellent electrical characteristics, such as reduced stray capacity, and increase productivity (col. 2, lines 2-7).

With respect to claim 10, Okuyama teaches the laminated ceramic electronic component according to claim 9. Okuyama does not teach the laminated ceramic electronic component, wherein a conductor width of the lead conductor is greater than a conductor width of the inner conductor. Ibata discloses the laminated ceramic electronic component (Fig. 35), wherein a conductor width of the lead conductor 52 is greater than a conductor width of the inner conductor 54 (see Fig. 35 for illustration) (col. 1, lines 24-30). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the lead conductor width teaching of Ibata in the laminated ceramic electronic component of Okuyama to provide excellent electrical

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characteristics, such as reduced stray capacity, and increase productivity (col. 2, lines 2-7).

With respect to claim 11, Okuyama teaches the laminated ceramic electronic component according to claim 9, wherein the inner conductor defines a coil 5 (para. 0056).

With respect to claim 12, Okuyama teaches the laminated ceramic electronic component according to claim 9, wherein the inner conductor includes a plurality of inner conductor pattern layers (para. 0063, 0066-0067). Okuyama does not teach the laminated ceramic electronic component, wherein the number of lead conductor pattern layers of said plurality of lead conductor pattern layers is less than the number of inner conductor pattern layers of said plurality of inner conductor pattern layers.

Ibata teaches the laminated ceramic electronic component, wherein the number of lead conductor pattern layers (2 layers) of said plurality of lead conductor 7 pattern layers is less than the number of inner conductor 5 pattern layers of said plurality of inner conductor pattern layers (4 layers) (see Fig. 1 for illustration). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the number of lead conductor pattern layers teaching of Ibata in the laminated ceramic electronic component of Okuyama to provide excellent electrical characteristics, such as reduced stray capacity, and increase productivity (col. 2, lines 2-7).

With respect to Claim 13, Okuyama in view of Ibata teaches the laminated ceramic electronic component according to claim 9. Okuyama in view of Ibata does not

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expressly teach the laminated ceramic electronic component, wherein a metal content of the lead conductor is greater than a metal content of the inner conductor. However, it would have been an obvious design choice at the time the invention was made to a person having ordinary skill in the art to increase the content of metal of the lead conductor to improve conductivity to meet design requirements for a specific application since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With respect to Claim 14, Okuyama in view of Ibata the laminated ceramic electronic component according to claim 9. Okuyama in view of Ibata does not expressly teach laminated ceramic electronic component, wherein the thickness of the inner conductor is in the range of about 70 microns to about 80 microns, and the thickness of the lead conductor is in the range of about 35 microns to about 40 microns. However, it would have been obvious design choice at the time the invention was made to a person having ordinary skill in the art to use the claimed inner conductor and lead conductor thickness to meet design requirements for a specific application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105, UPQ 237 (CCPA 1955).

With respect to claim 16, Okuyama teaches the laminated ceramic electronic component according to claim 12, wherein at least one of the inner conductor pattern

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layers is made of a conductive paste including resin particles having thermal decomposition characteristics sufficient such that the resin particles are consumed when subjected to firing (paras. 0065, 0082).

With respect to claim 17, Okuyama teaches the laminated ceramic electronic component according to claim 12, wherein each of the plurality of inner conductor pattern 13b and 15b layers is substantially U-shaped (see FIG. 3 for illustration, paras. 0063, 0067).

With respect to claim 18, Okuyama teaches the laminated ceramic electronic component according to claim 12, wherein the inner conductor 13b and 15b is a spiral coil 5 (see FIG. 2B for illustration, para. 0056).

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (U.S. Pub. No. 2002/0008606 A1) in view of Ibata et al. (U.S. Patent No. 6,169,470 B1), as applied to claim 12 above, and further in view of Kobayashi (U.S. Patent No. 6,229,425 B1).

With respect to claim 15, Okuyama in view of Ibata teaches the laminated ceramic electronic component according to claim 12. Okuyama in view of Ibata does not teach the laminated ceramic electronic component, wherein the number of inner conductor pattern layers is 10 and the number of lead conductor pattern layers is 5.

In the same field of invention, Kobayashi teaches a laminated ceramic electronic component 10 (FIG. 1), wherein the number of inner conductor pattern layers is 10 (12a, 13a, 15, 15, 17, 19, 20, 21, 12b, and 13b) and the number of lead conductor

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pattern layers is 5 (11a, 14a, 18, 11b, and 14b) (col. 3, lines 22-30). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the number of inner conductor pattern and the lead conductor teaching of Kobayashi in the laminated ceramic electronic component of Okuyama in view of Ibata to improve reliability and reduce manufacturing cost (col. 2, lines 4-6).

Response to Arguments

5. Applicant's arguments with respect to claims 9-18 filed on 3/30/2010 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For instance, Tatsukawa et al. (U.S. Pub. No. 2002/0144765 A1) teaches a laminated ceramic electronic component (FIG. 1) comprising a plurality of lead conductor layers (para. 0042). Amaya et al. (U.S. Patent No. 6,194,248 B1) discloses a laminated ceramic electronic component (FIG. 8), wherein a thickness of the lead conductor 3 is less than a thickness of the inner conductor 2 (col. 1, lines 11-24).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANGTIN LIAN whose telephone number is (571)270-5729. The examiner can normally be reached on Mon - Thurs 0800 - 1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. L./
Examiner, Art Unit 2832

/Elvin G Enad/
Supervisory Patent Examiner, Art
Unit 2832